

Fig. 1A

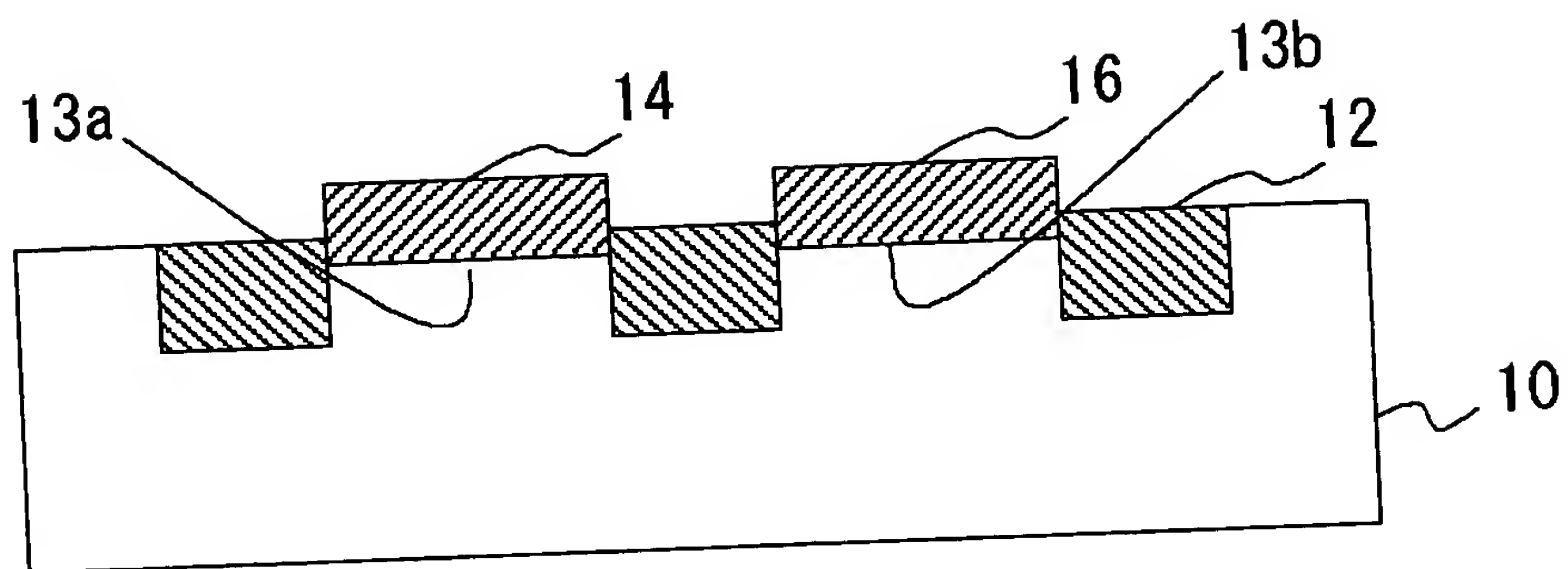


Fig. 1B

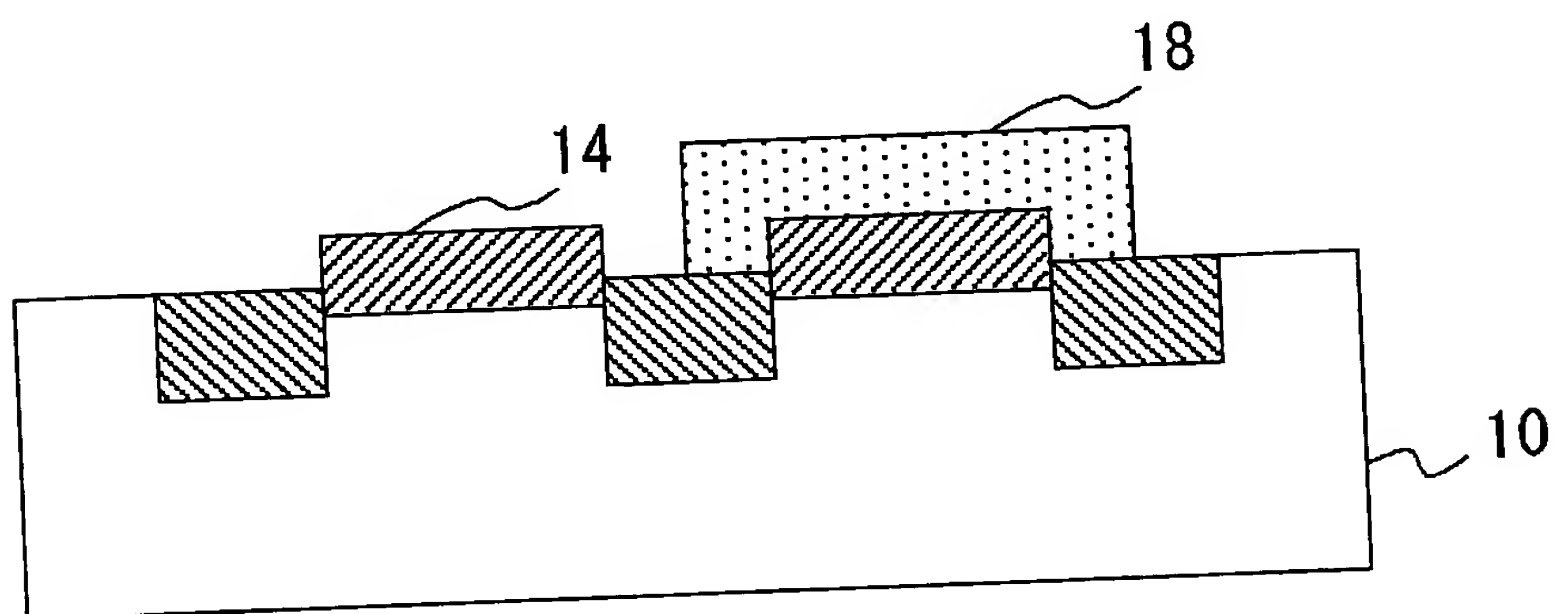


Fig. 1C

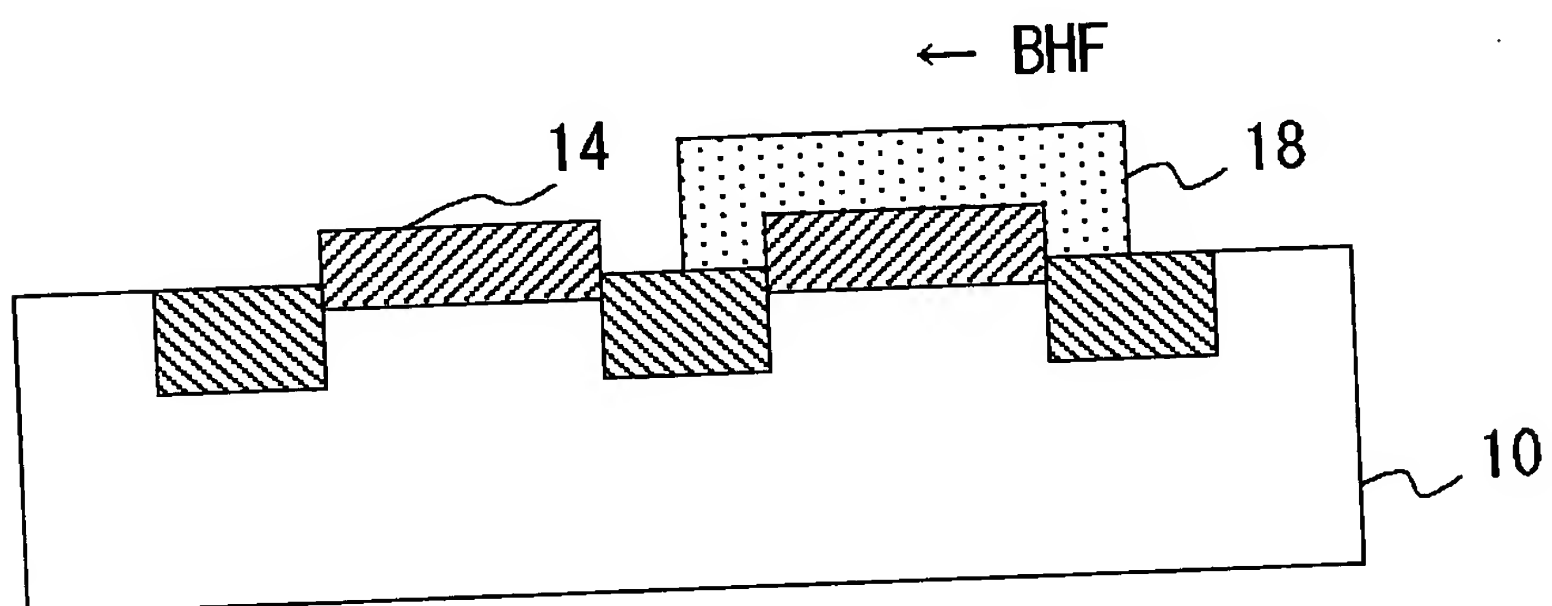
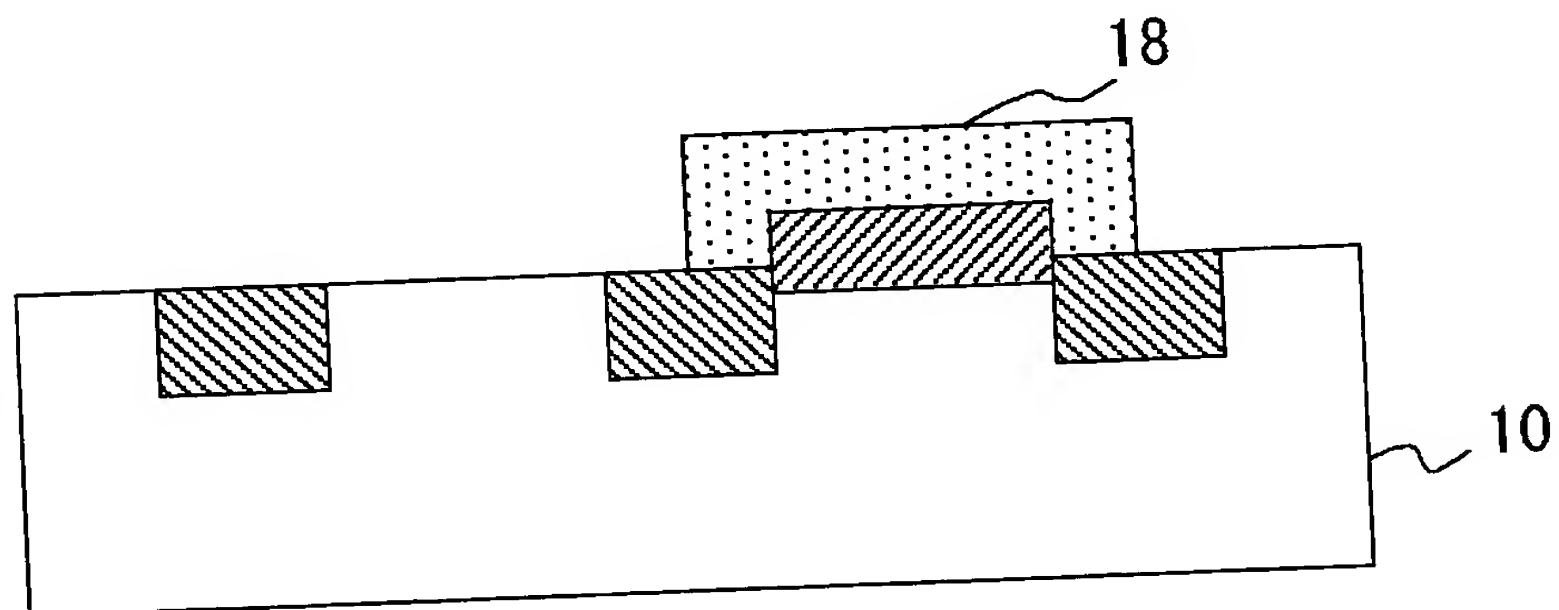
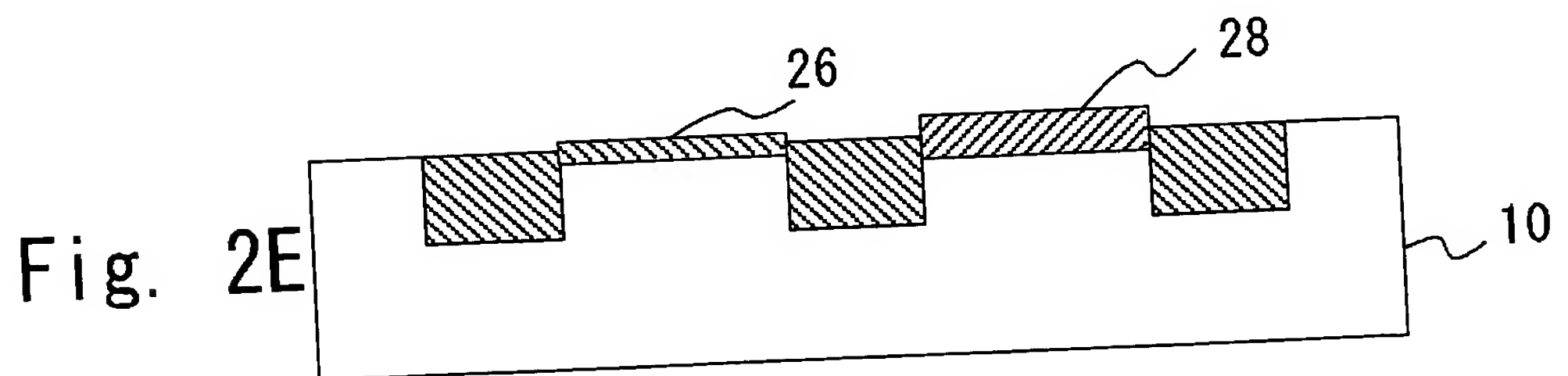
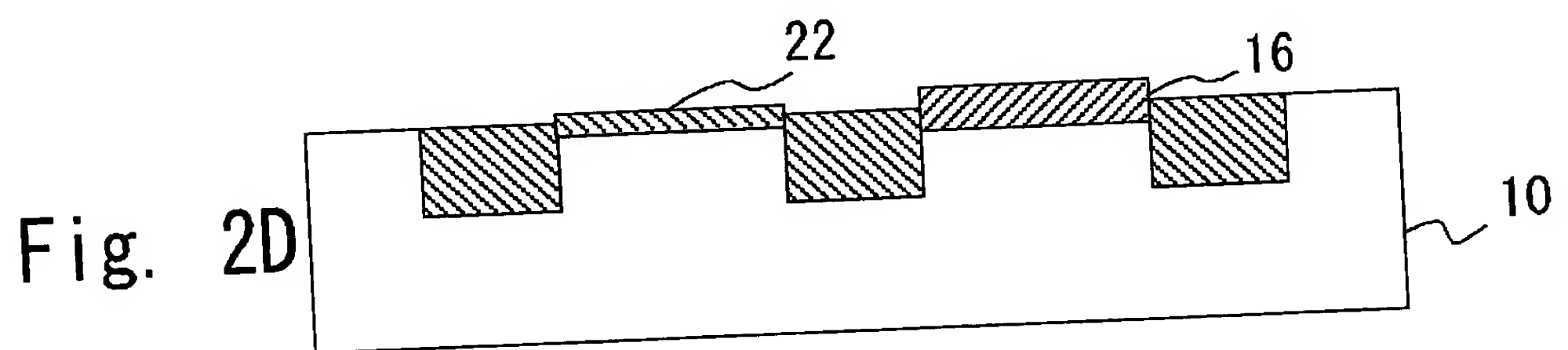
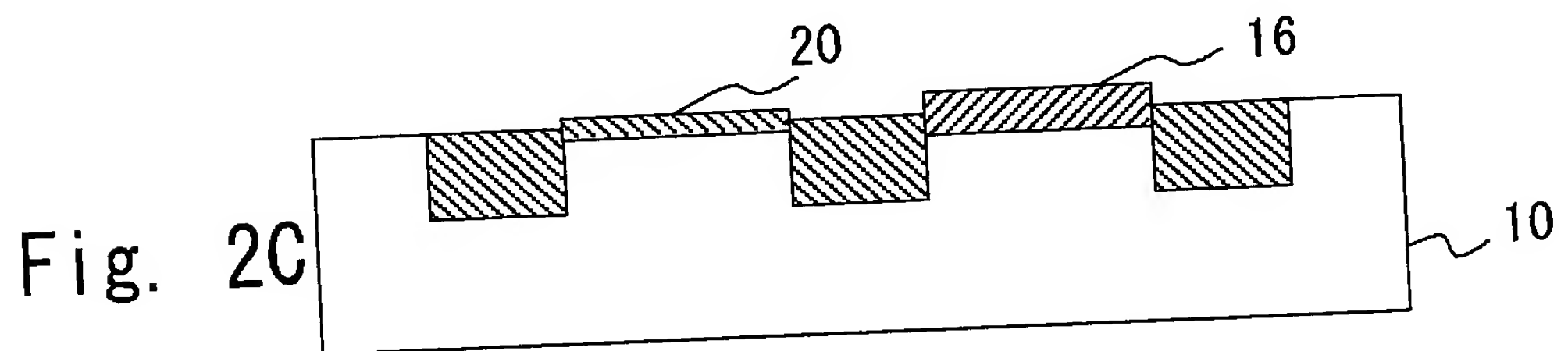
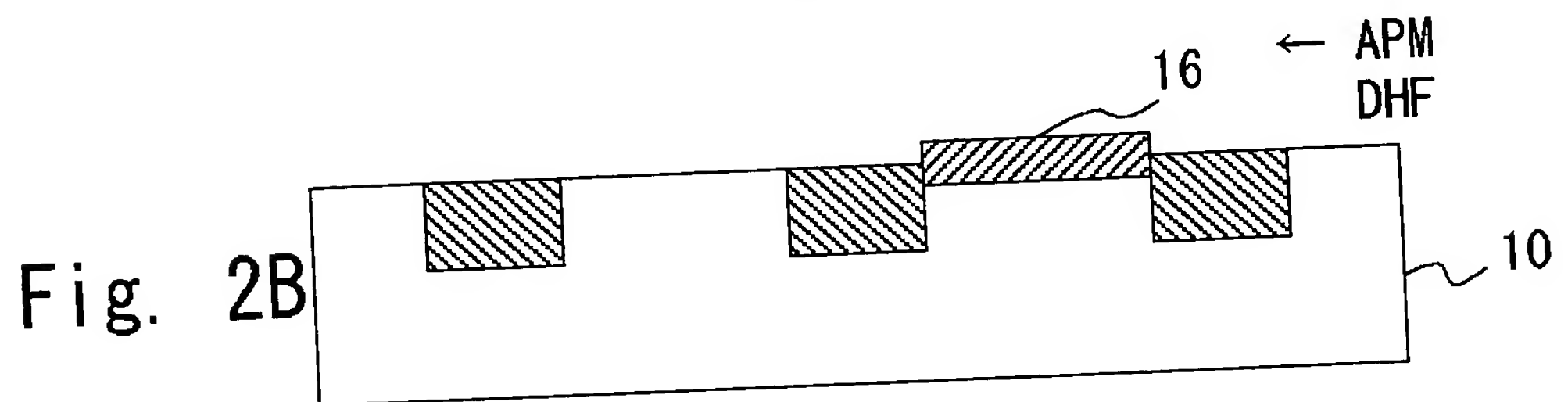
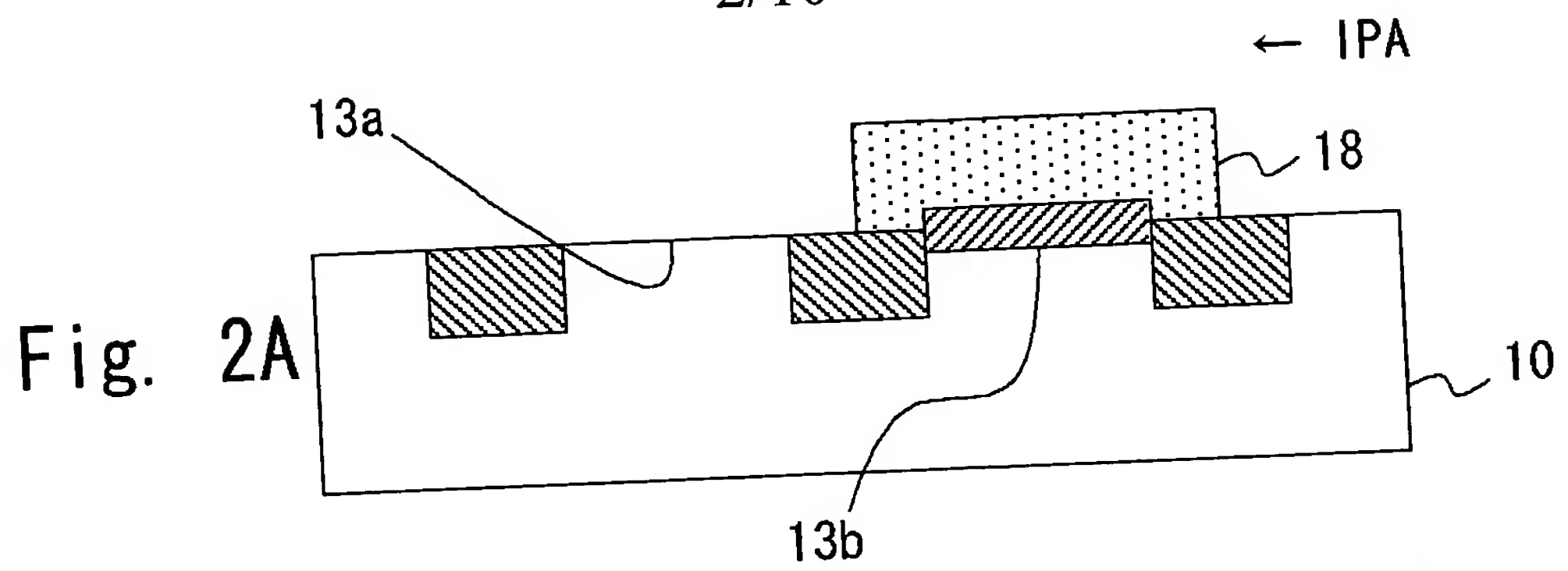


Fig. 1D





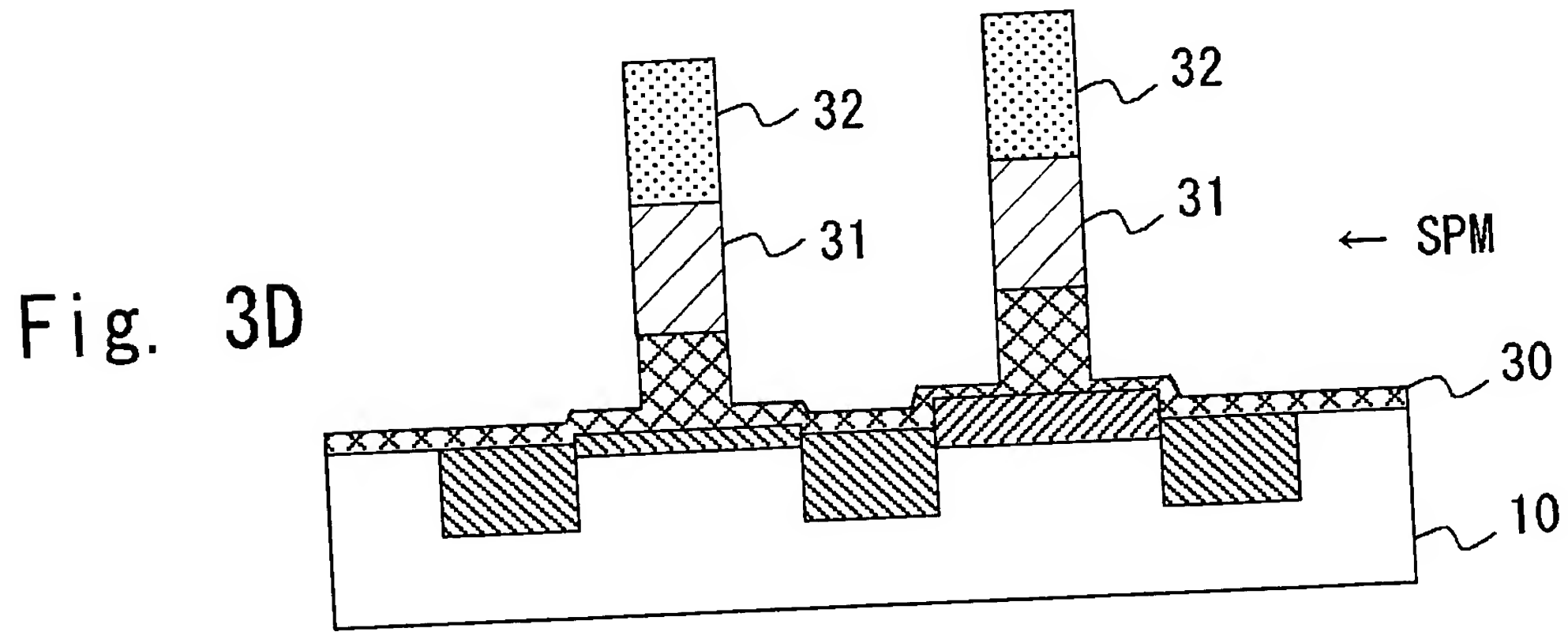
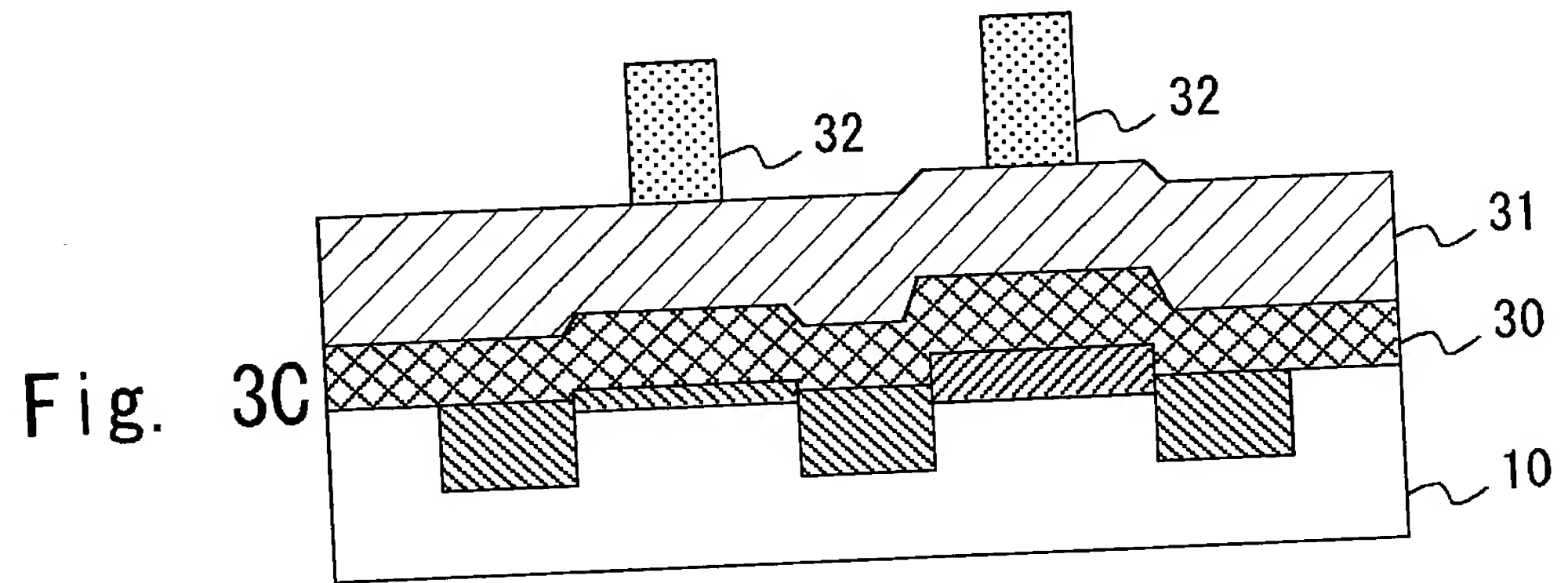
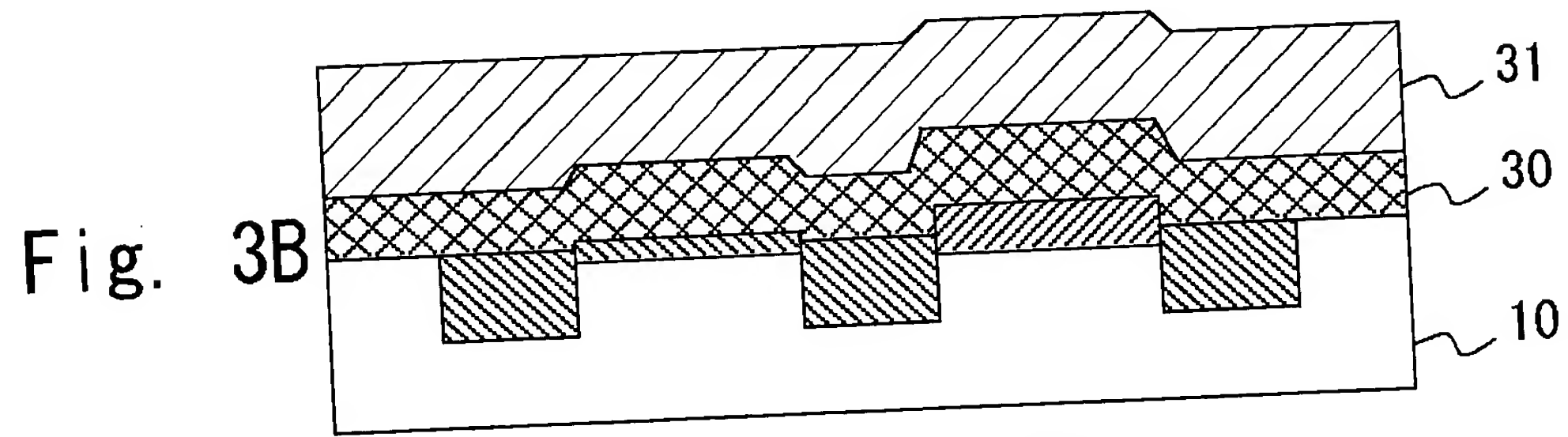
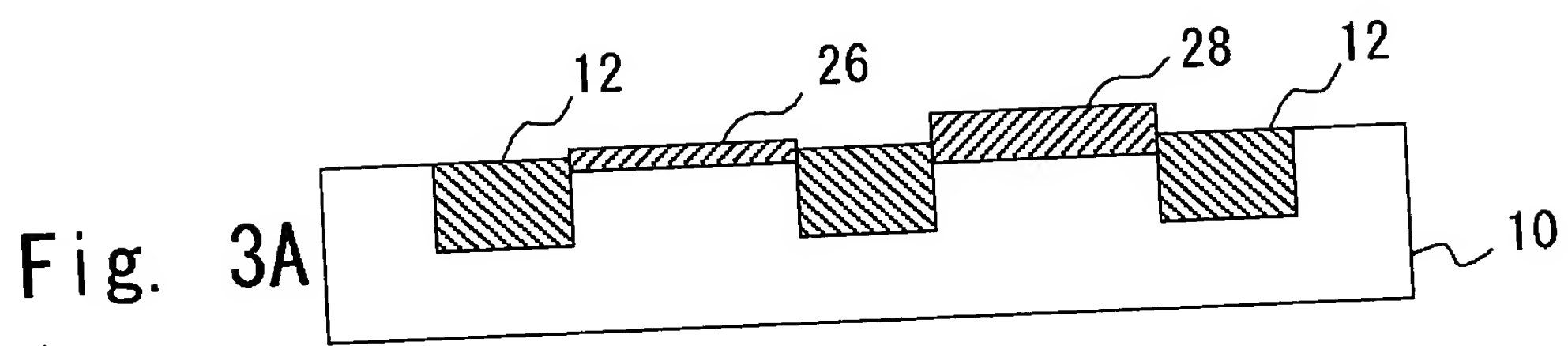


Fig. 4A

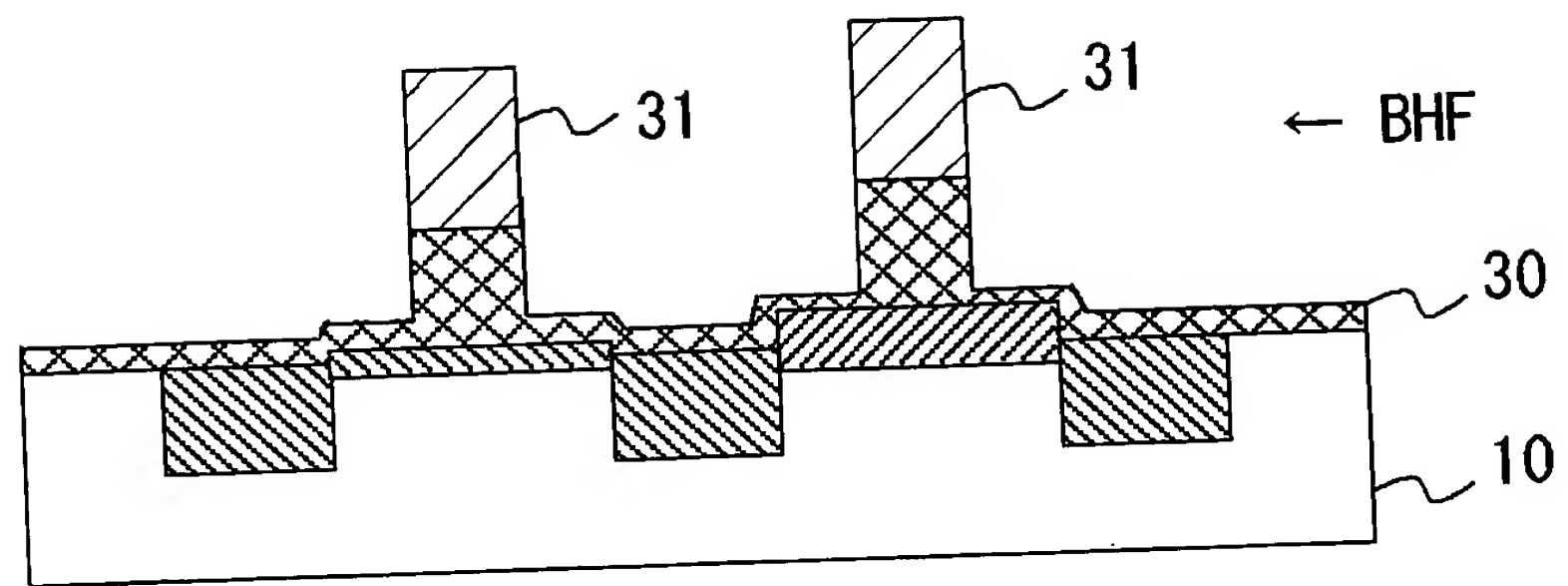


Fig. 4B

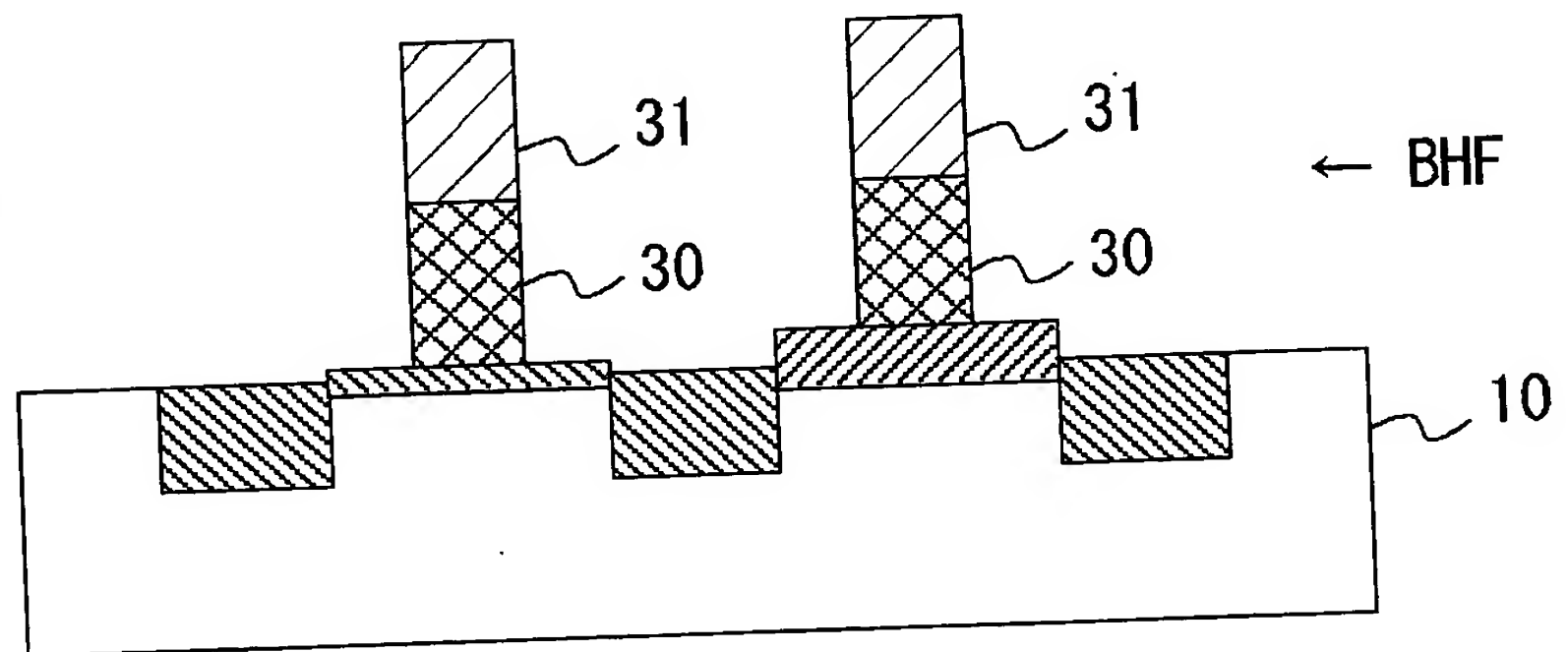
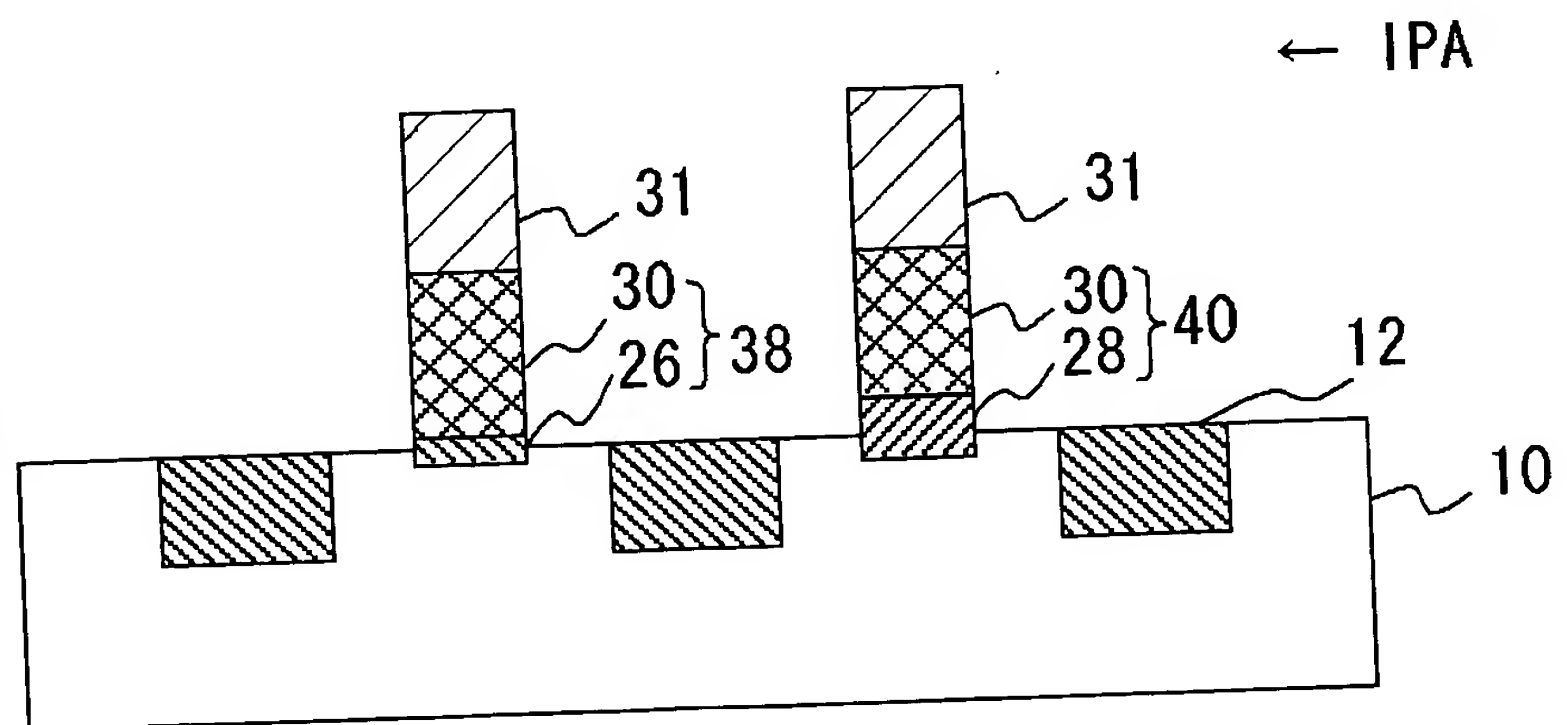


Fig. 4C



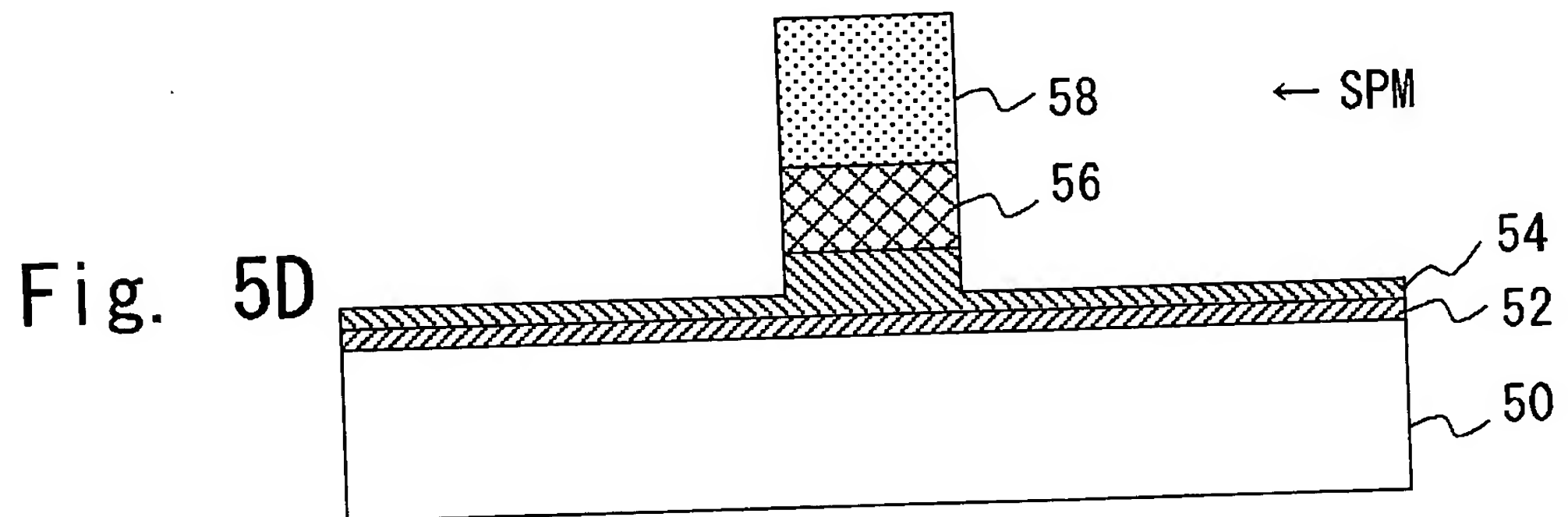
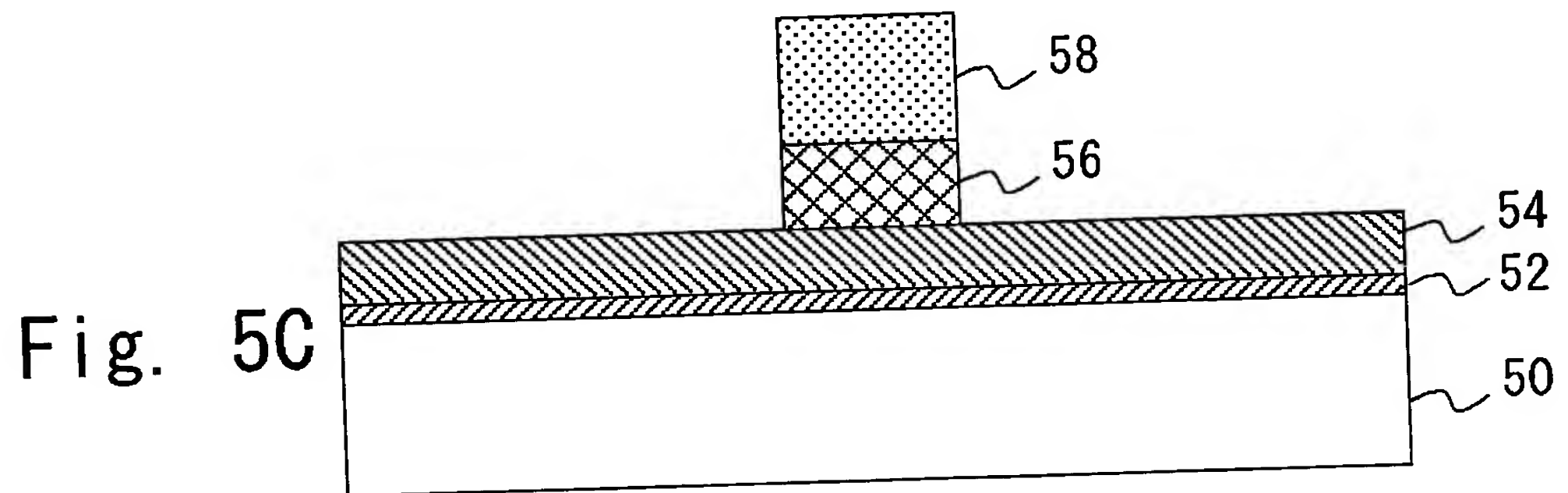
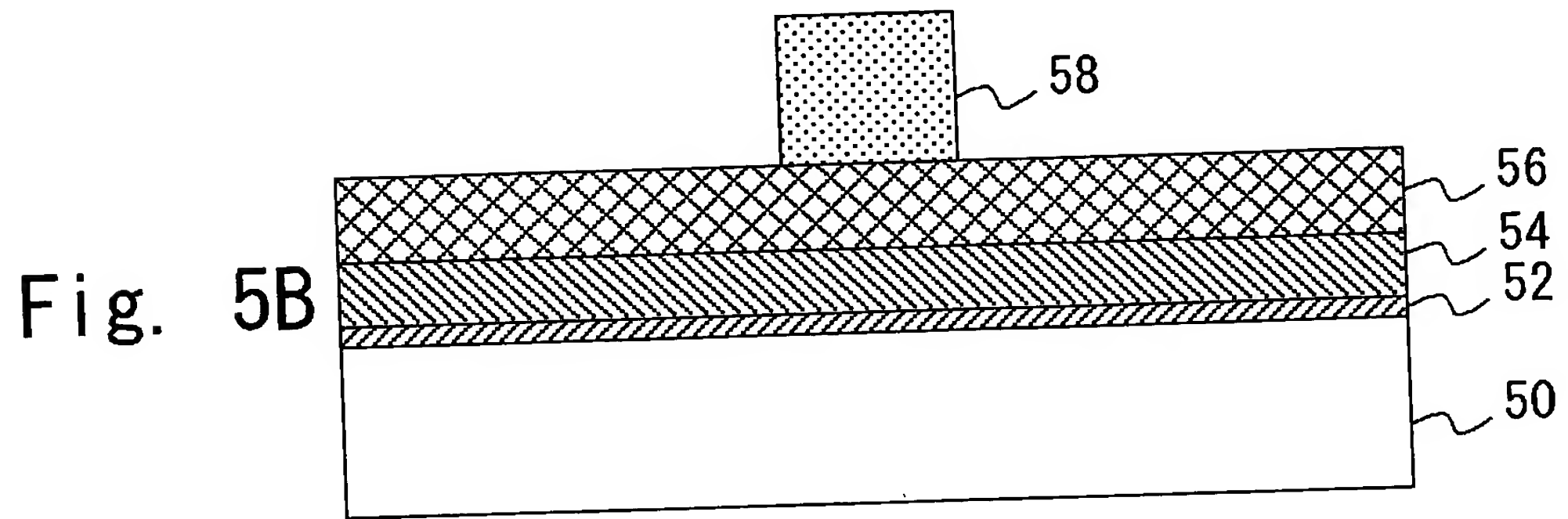
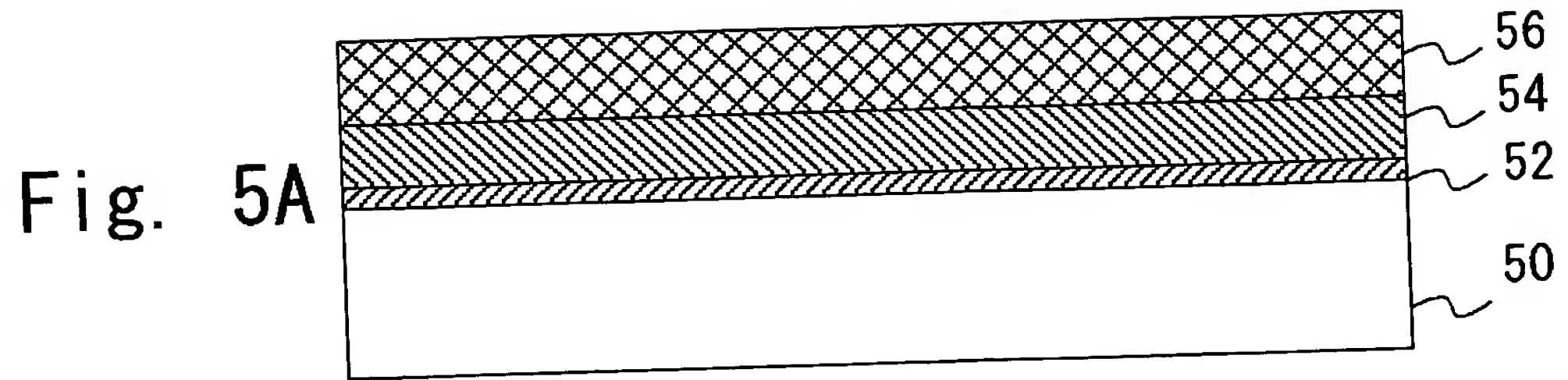


Fig. 6A

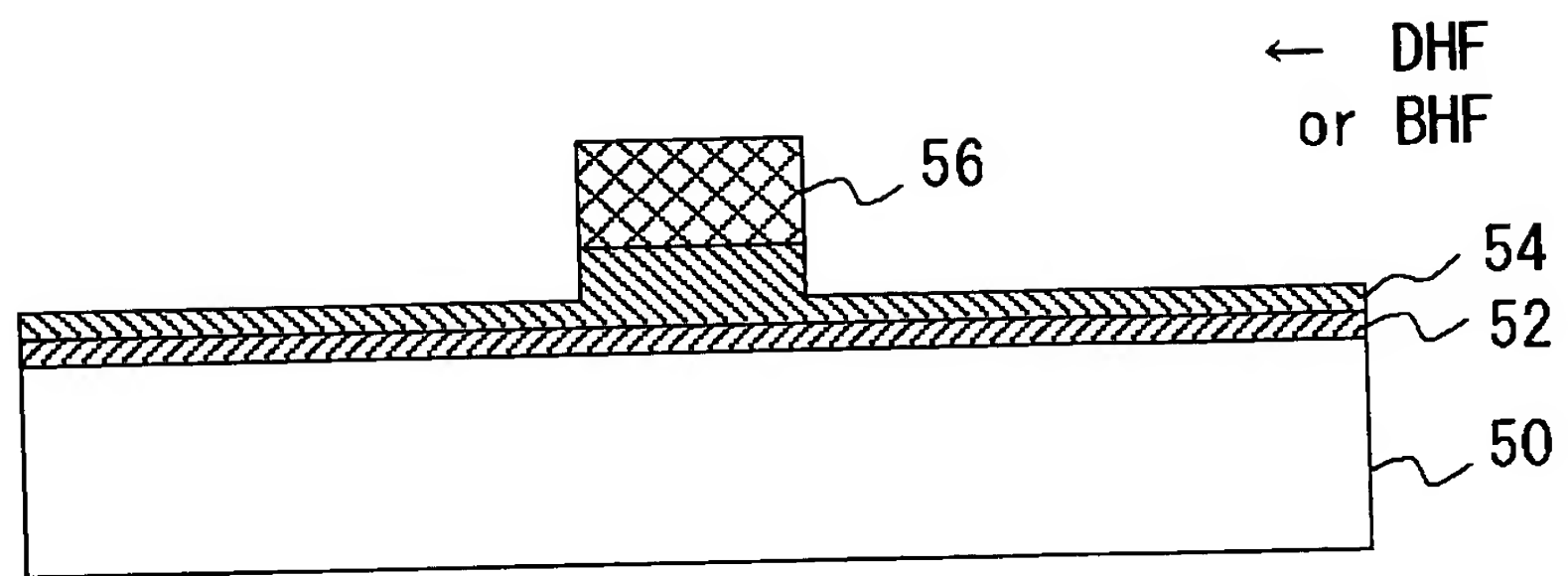


Fig. 6B

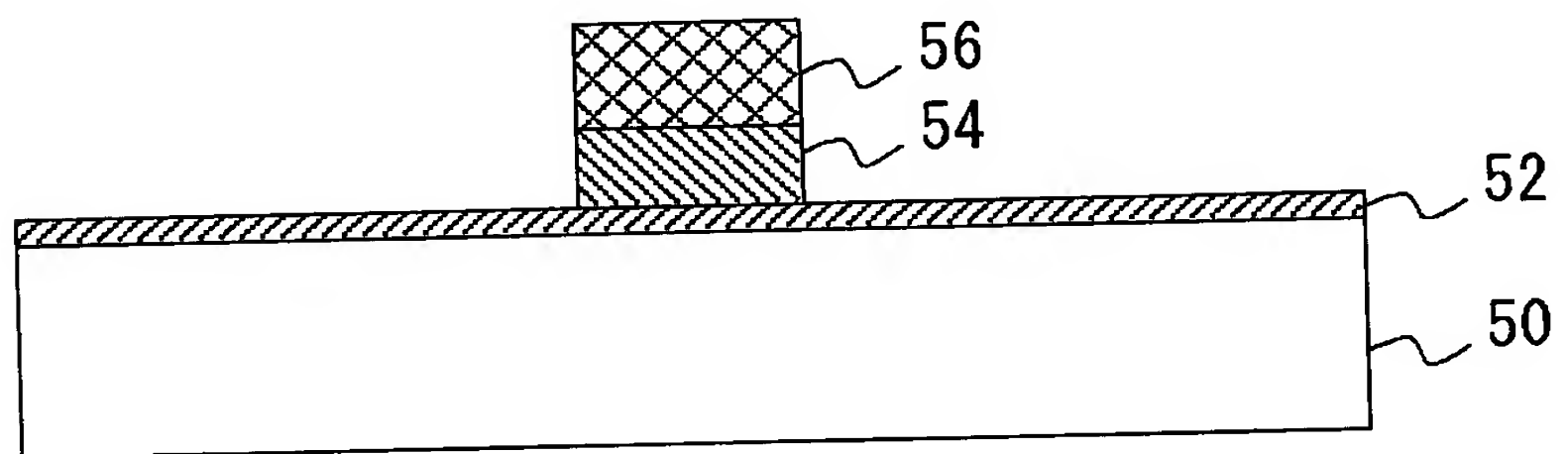


Fig. 6C

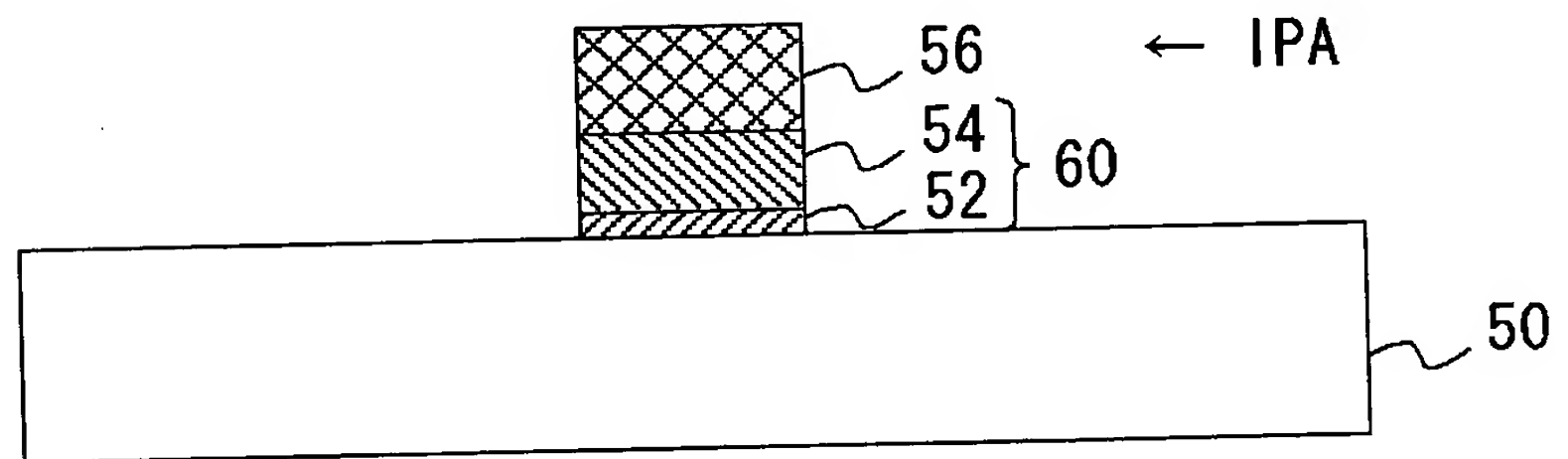


Fig. 6D

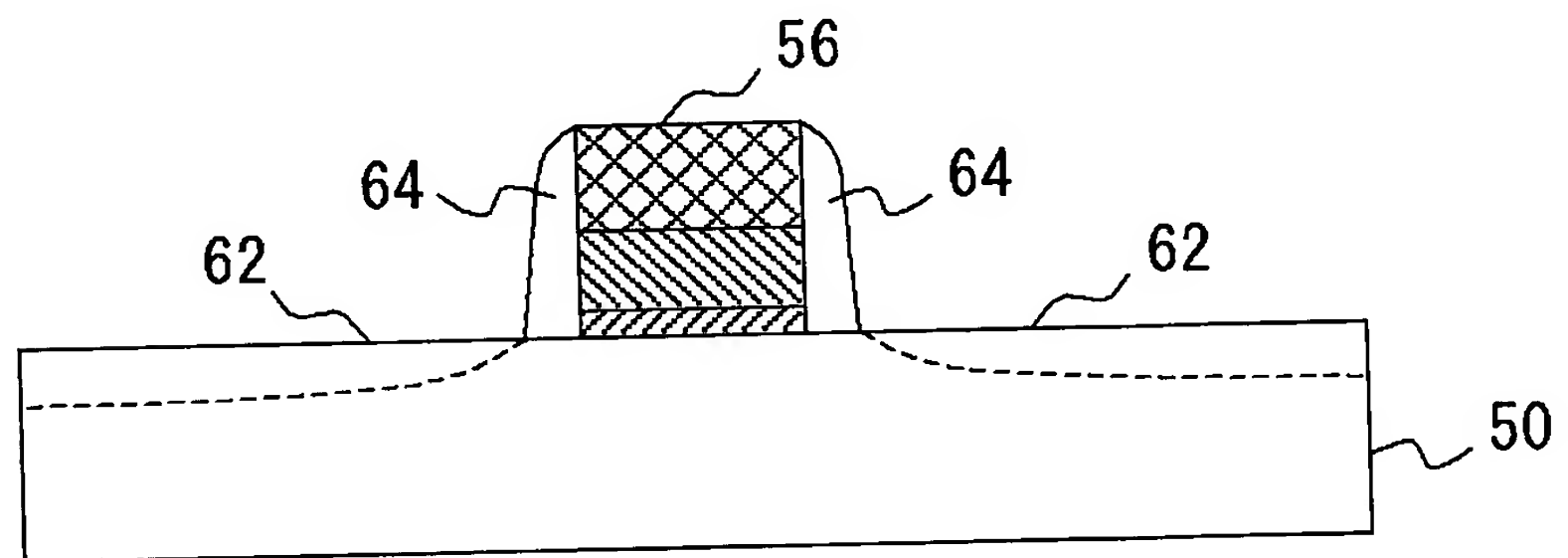
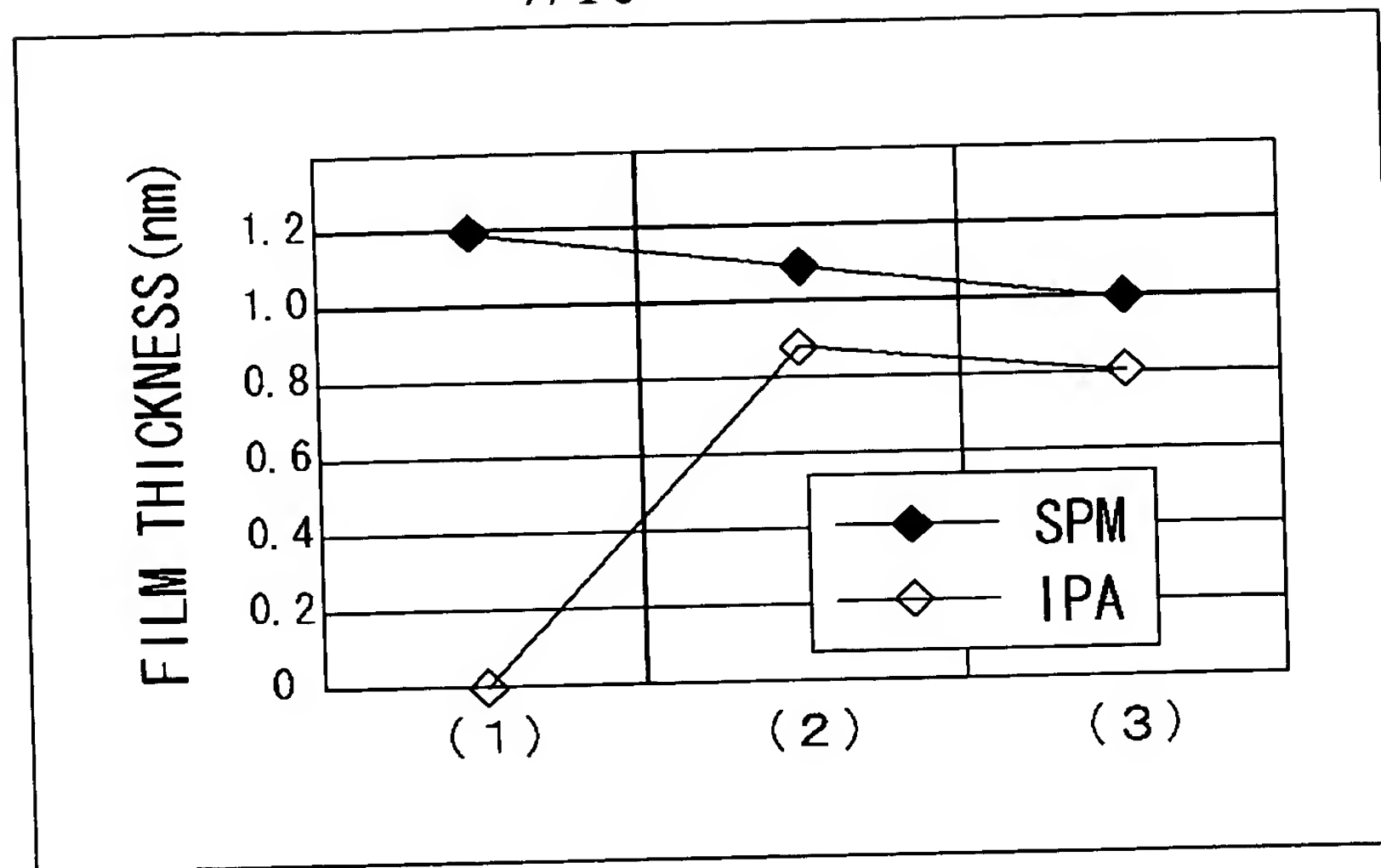


Fig. 7



- (1) AFTER REMOVING RESIST LAYER
- (2) AFTER APM/DHF CLEANING
- (3) AFTER THERMAL OXIDIZATION

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Fig. 8A

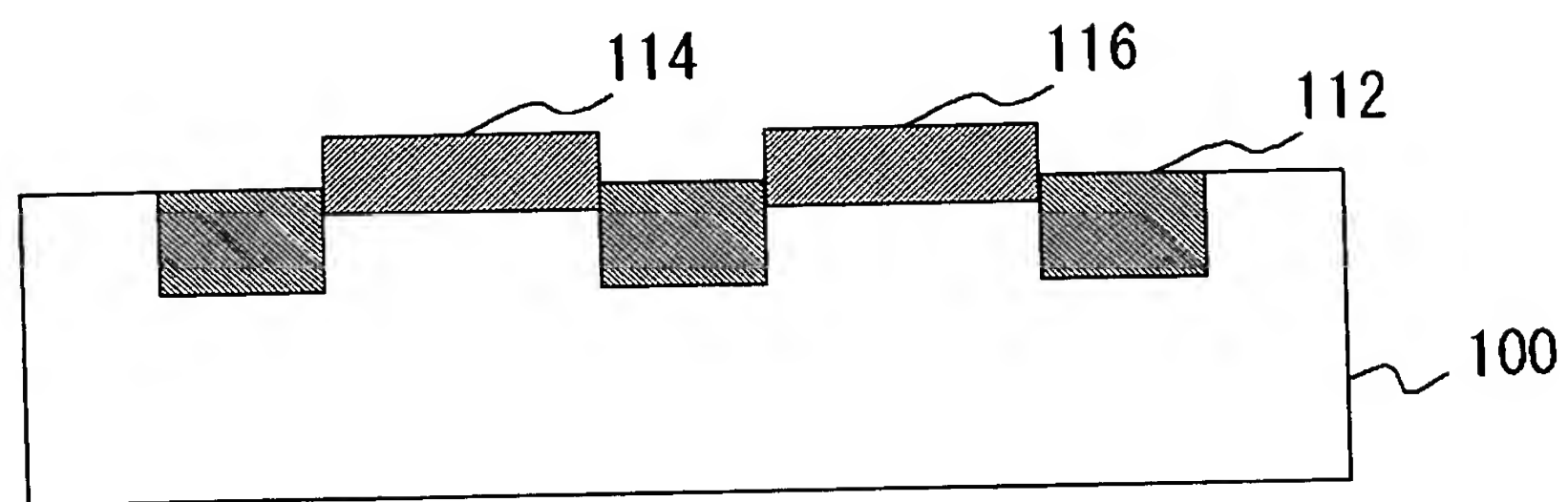


Fig. 8B

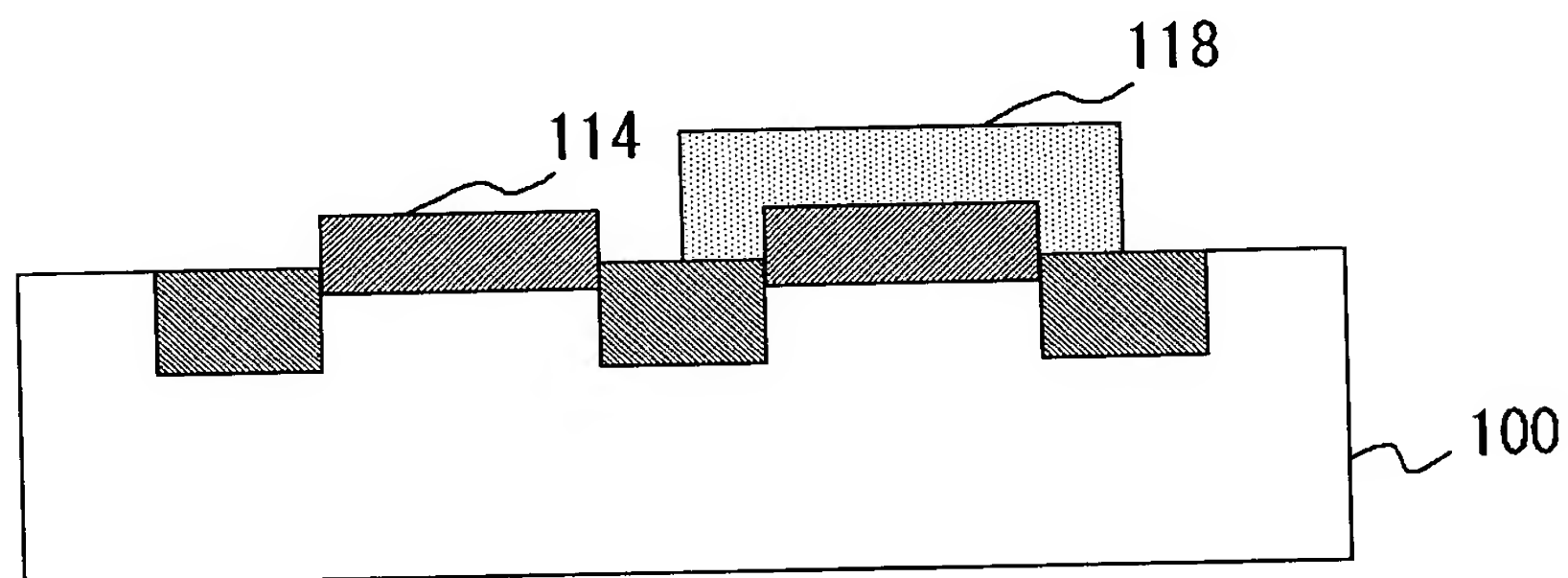


Fig. 8C

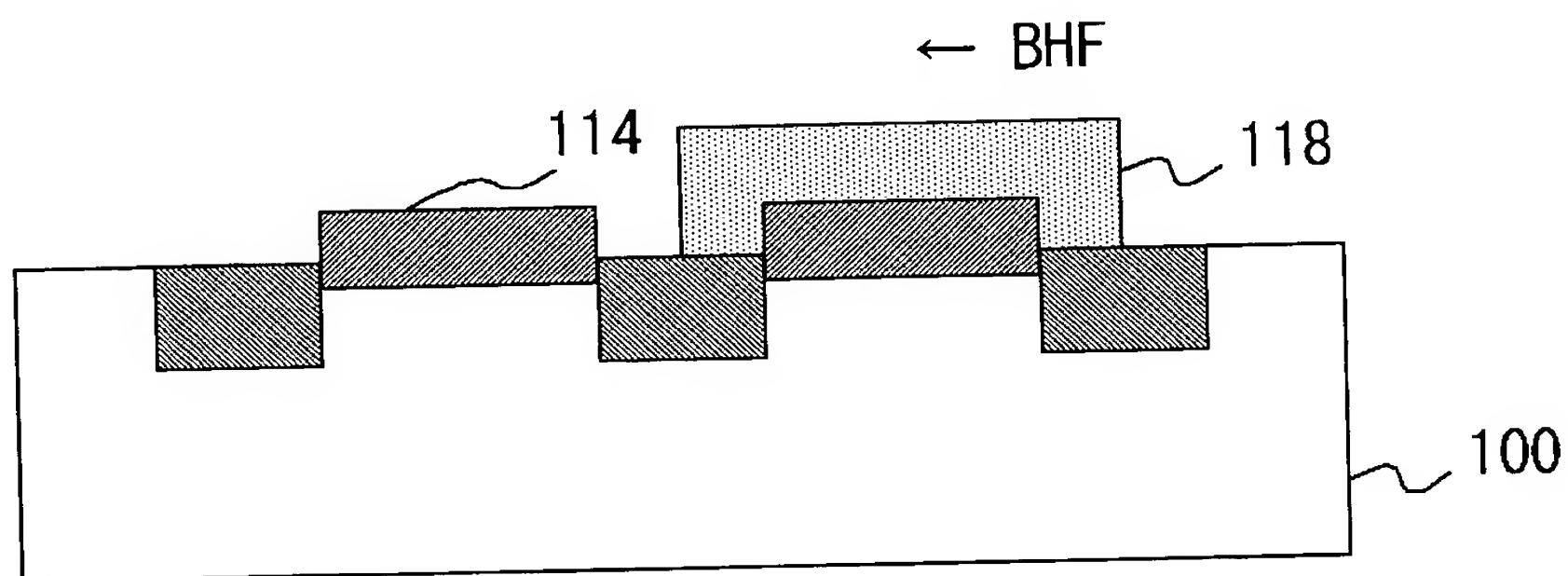
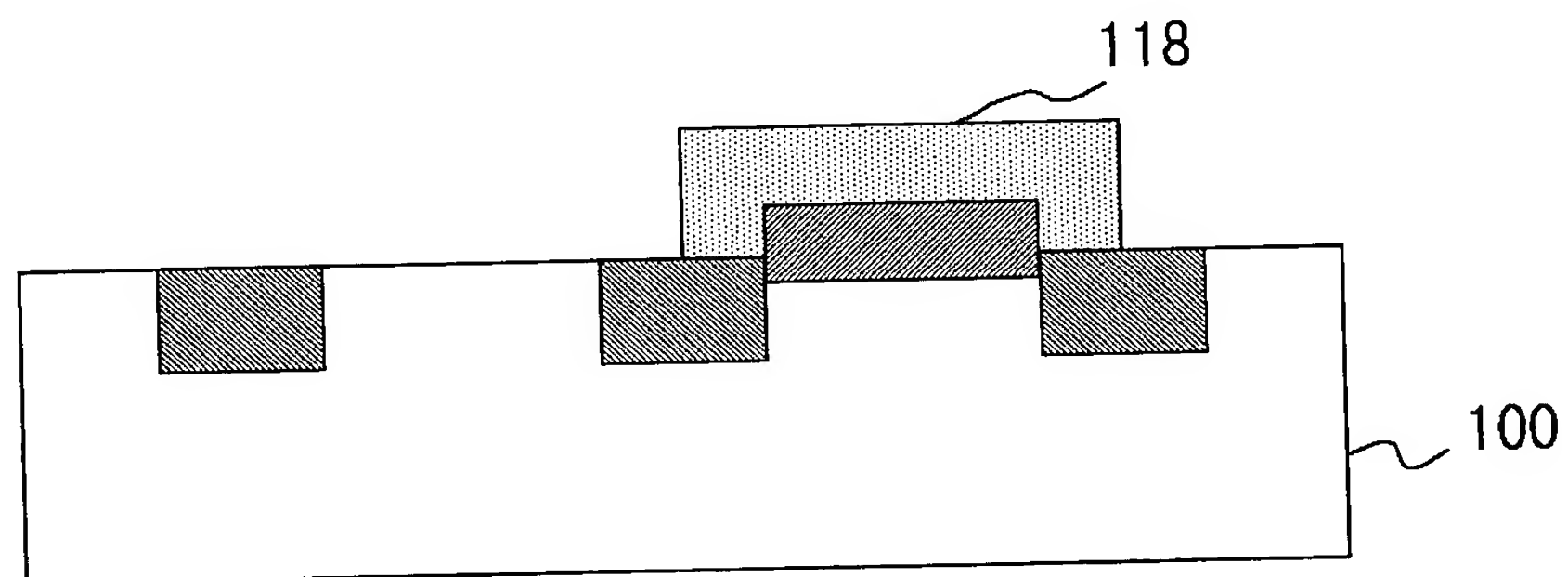


Fig. 8D



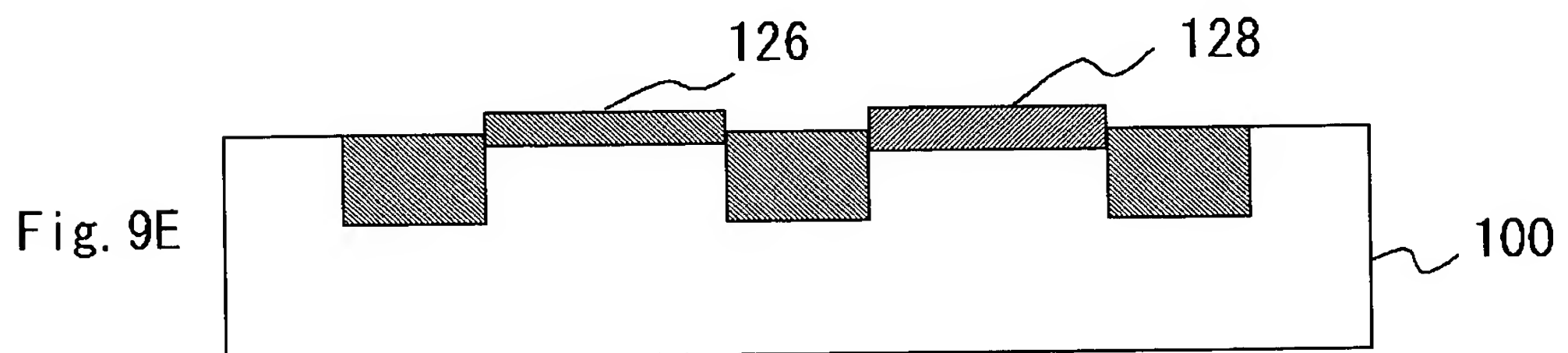
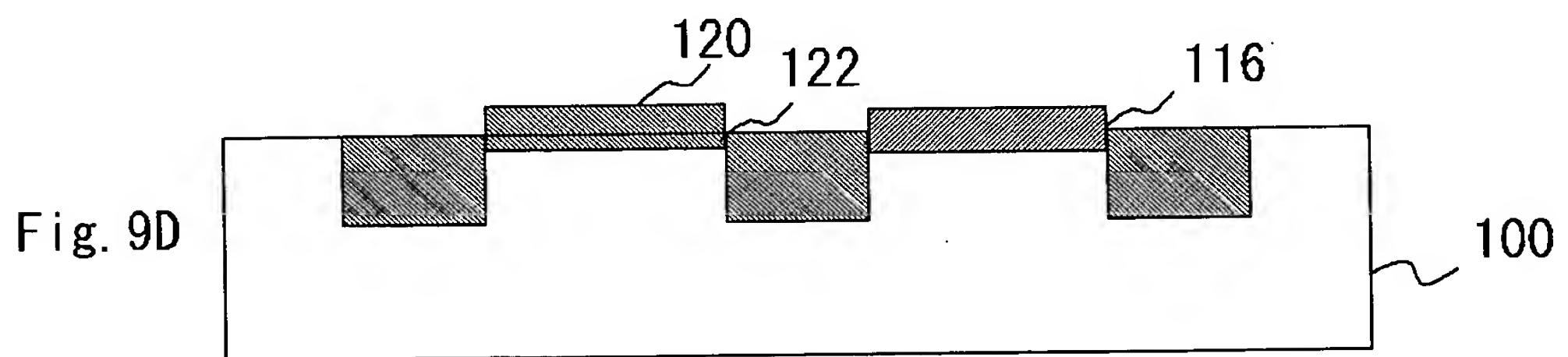
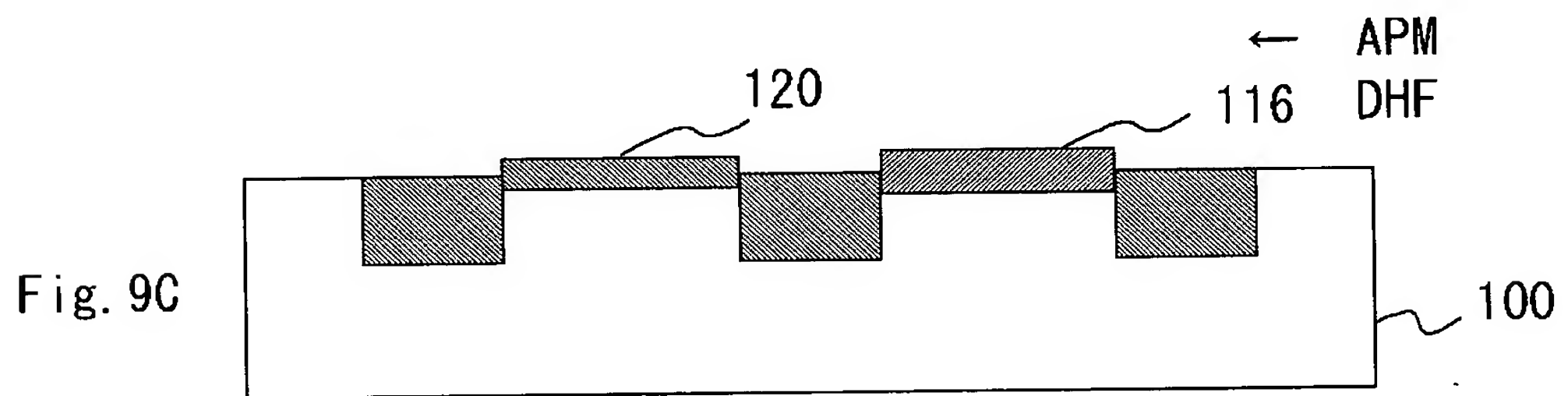
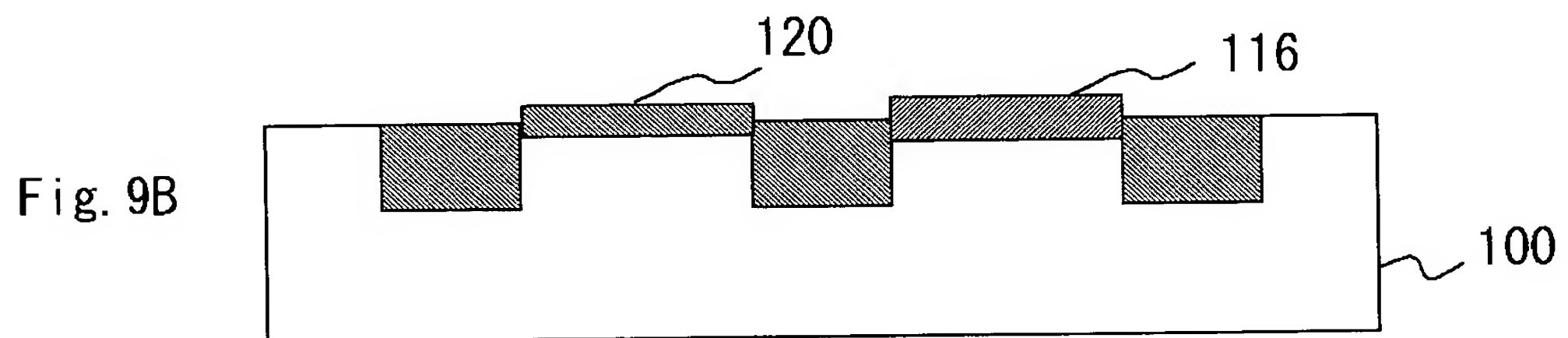
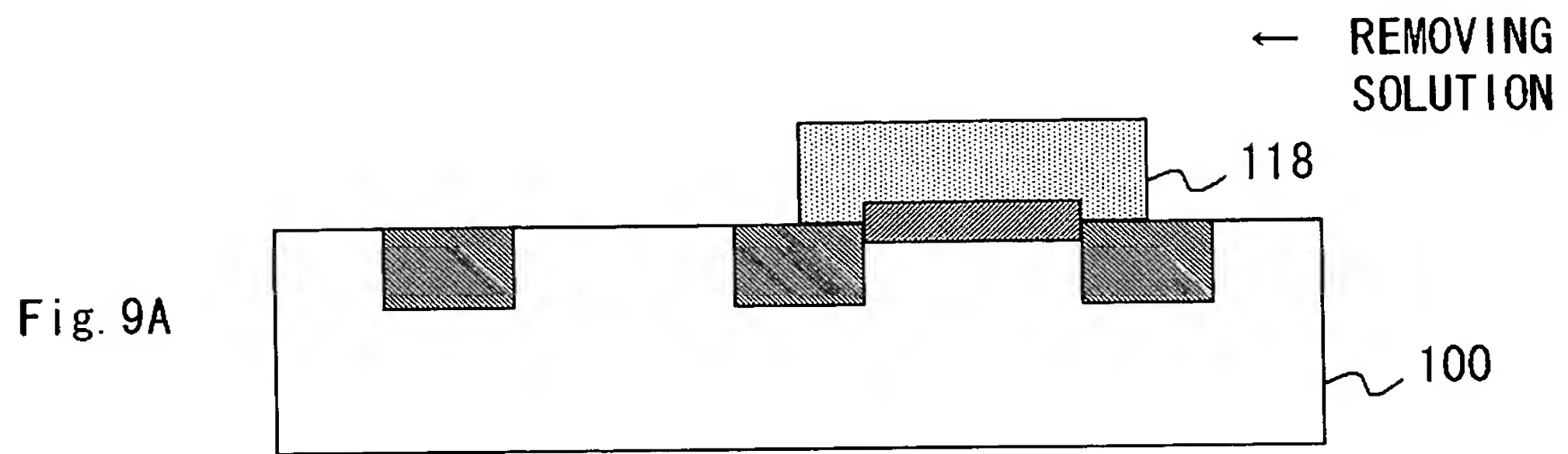


Fig. 10

HfO ₂				SELECTIVITY RATIO
CHEMICAL SOLUTION	TEMP.	HfO ₂	SiO ₂	HfO ₂ /SiO ₂
PHOSPHORIC ACID (85%)	160°C	0.2nm/min	2nm/min	0.1
SULFURIC ACID(96%)	160°C	0.1nm/min	0.01nm/min	10
HYDROFLUORIC ACID(50%)	AMBIENT TEMP.	0.1nm/min	1.7nm/min	<0.0001

Fig. 11

HfAlO _x				SELECTIVITY RATIO
CHEMICAL SOLUTION	TEMP.	HfAlO _x	SiO ₂	HfAlO _x /SiO ₂
PHOSPHORIC ACID (85%)	80°C	>1nm/min	<0.1nm/min	>10
SULFURIC ACID(96%)	160°C	>1nm/min	0.01nm/min	>10
DHF(0.5%)	AMBIENT TEMP.	>5nm/min	4nm/min	>1